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IN THE CLAIMS:

Please CANCEL claims 6-9, 20-25 and 33, without prejudice and AMEND claims 1, 3, 13, 15, 18, 26, 28, 30 and 34 so that the claims read as follows:

1. (CURRENTLY AMENDED) A substrate transport system comprising:
a conveyor adapted to transport a substrate carrier; and
an unload mechanism adapted to unload the substrate carrier from the conveyor while the conveyor is moving the substrate carrier;
wherein the unload mechanism is adapted to contact the substrate carrier with substantially zero velocity or zero velocity in a vertical direction as the substrate carrier is transported by the conveyor.

2. (ORIGINAL) The substrate transport system of claim 1, further comprising:
a controller coupled to the unload mechanism and adapted to raise the unload mechanism while substantially matching a velocity of the unload mechanism to a velocity at which the substrate carrier is transported by the conveyor.

3. (CURRENTLY AMENDED) The substrate transport system of claim 2 wherein the controller is further adapted to cause the unload mechanism to contact the substrate carrier with substantially zero velocity or ~~less~~ zero velocity in a vertical direction as the substrate carrier is transported by the conveyor.

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4. (ORIGINAL) The substrate carrier transport system of claim 2, wherein the conveyor includes a plurality of suspension assemblies, each suspension assembly adapted to suspend a respective substrate carrier from the conveyor.

5. (ORIGINAL) The substrate carrier transport system of claim 4, wherein the unload mechanism is adapted to disengage the substrate carrier from one of the suspension assemblies as the unload mechanism is raised.

6-9 (CANCELLED).

10. (ORIGINAL) The substrate carrier transport system of claim 1, wherein the substrate carrier is a single substrate carrier.

11. (ORIGINAL) The substrate carrier transport system of claim 1, wherein the unload mechanism is also adapted to load a substrate carrier onto the conveyor as the conveyor is moving.

12. (ORIGINAL) The substrate carrier transport system of claim 2, wherein the unload mechanism is adapted to move in a non-rotary path.

13. (CURRENTLY AMENDED) A method of operating a substrate carrier transport system, comprising:
 using a conveyor to move a substrate carrier; and
 while the substrate carrier is moving along the conveyor, unloading the substrate carrier from the conveyor by contacting the substrate carrier with substantially zero

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velocity or zero velocity in a vertical direction as the substrate carrier is transported by the conveyor.

14. (ORIGINAL) The method of claim 13, wherein unloading the substrate carrier from the conveyor comprises moving an unload mechanism so that at a time when the unload mechanism contacts the substrate carrier a velocity of the unload member substantially matches a velocity at which the substrate carrier is moving along the conveyor.

15. (CURRENTLY AMENDED) The method of claim 14, wherein the unload mechanism contacts the substrate carrier with substantially zero acceleration or ~~less~~ zero acceleration.

16. (ORIGINAL) The method of claim 13, further comprising, while the conveyor is moving, loading a substrate carrier onto the conveyor.

17. (ORIGINAL) The method of claim 16, wherein loading the substrate carrier onto the conveyor comprises moving a load mechanism so that at a time when a substrate carrier being transported by the load mechanism contacts the conveyor, a velocity of the substrate carrier substantially matches a velocity at which the conveyor is moving.

18. (CURRENTLY AMENDED) The method of claim 17, wherein the substrate carrier contacts the conveyor with substantially zero acceleration or ~~less~~ zero acceleration.

19. (ORIGINAL) The method of claim 17, wherein a single mechanism functions as the load mechanism and the unload mechanism.

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20-25 (CANCELLED).

26. (CURRENTLY AMENDED) A substrate carrier transport system comprising:

a conveyor adapted to transport a substrate carrier; and

a load/unload mechanism adapted to unload the substrate carrier from the conveyor while the substrate carrier is moving along the conveyor, and to load the substrate carrier onto the conveyor while the conveyor is moving;

wherein the load/unload mechanism is adapted to contact the substrate carrier with substantially zero velocity or zero velocity in a vertical direction as the substrate carrier is transported by the conveyor.

27. (ORIGINAL) The substrate carrier transport system of claim 26, wherein the load/unload mechanism is adapted to substantially match velocity between the substrate carrier and the conveyor, and between the substrate carrier and the load/unload mechanism, respectively, at a time of contact.

28. (CURRENTLY AMENDED) The substrate carrier transport system of claim 27, wherein:

during loading, the substrate carrier contacts the conveyor with substantially zero acceleration or ~~less~~ zero acceleration; and

during unloading, the load/unload mechanism contacts the substrate carrier with substantially zero acceleration or ~~less~~ zero acceleration.

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29. (PREVIOUSLY PRESENTED) The substrate carrier transport system of claim 26, wherein the conveyor includes a plurality of suspension assemblies, each suspension assembly adapted to suspend a respective substrate carrier from the conveyor.

30. (CURRENTLY AMENDED) A substrate loading station comprising:

a load port from which a substrate may be loaded to or from a processing tool;

a load/unload mechanism for loading or unloading substrate carriers to or from a factory transport mechanism, the load/unload mechanism being adapted so as to substantially match a velocity of a substrate carrier moving along the factory transport mechanism when the load/unload mechanism initially contacts the substrate carrier; and

an apparatus for transporting a substrate carrier between the load/unload mechanism and the load port;

wherein the load/unload mechanism is adapted to contact a substrate carrier with substantially zero velocity or zero velocity in a vertical direction as the substrate carrier is transported by the conveyor.

31. (ORIGINAL) The substrate loading station of claim 30, further comprising at least one storage shelf for storing a substrate carrier, wherein the apparatus for transporting a substrate carrier between the load/unload mechanism and the load port is further adapted to transport substrate carriers to and from the at least one storage shelf.

32. (ORIGINAL) The substrate loading station of claim 31, wherein the apparatus for transporting a substrate

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carrier comprises a substrate carrier handler having an end effector and a plurality of linear guides which allow the substrate carrier handler to move vertically and horizontally.

33. (CANCELLED).

34. (CURRENTLY AMENDED) The substrate loading station of claim 30, wherein the load/unload mechanism is adapted to contact the substrate carrier with substantially zero acceleration or ~~less~~ zero acceleration.